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Washington, DC 20460

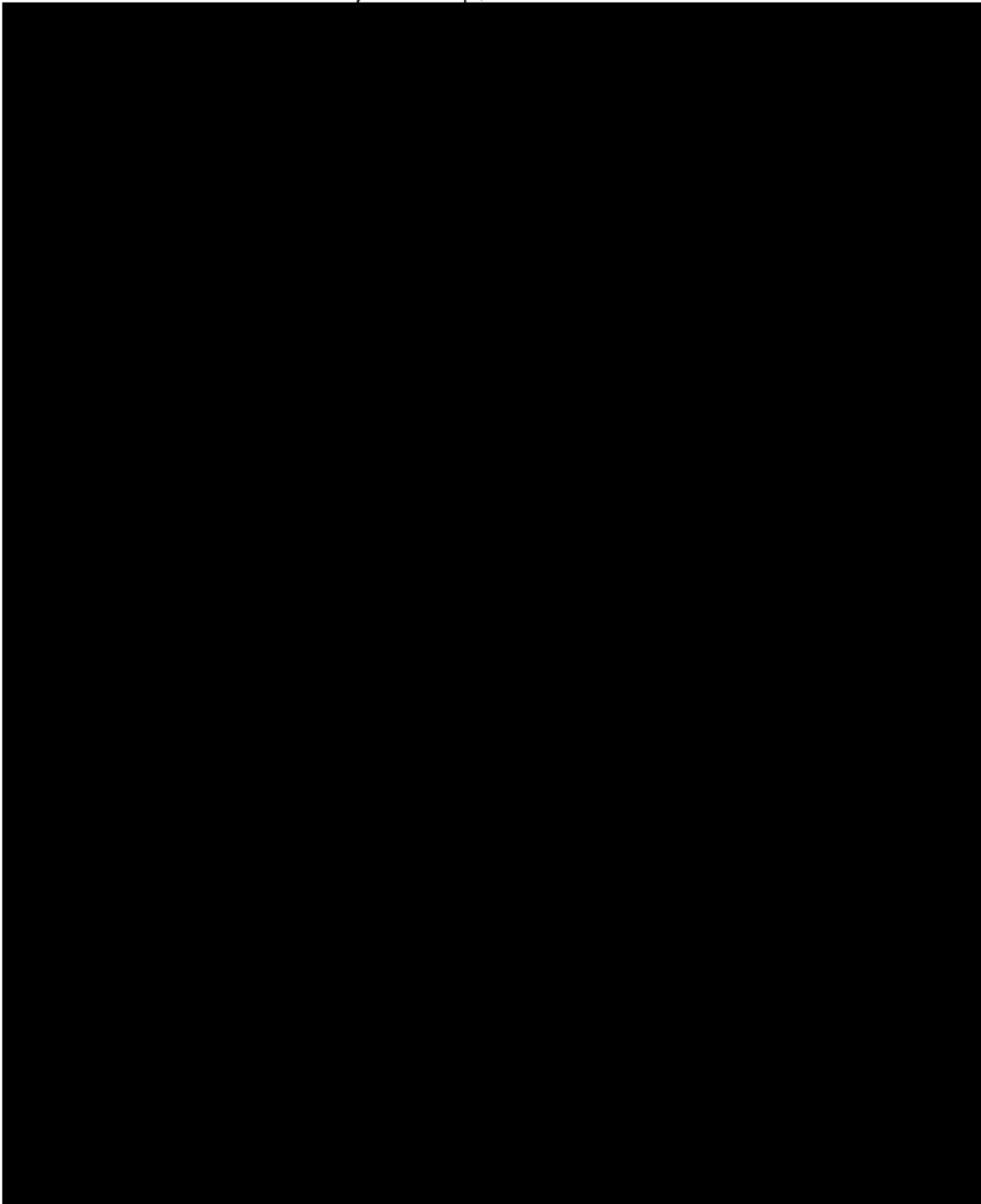
ORIGINAL

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Final

**FOCUS REPORT  
New Chemicals Program**

**PART I: BACKGROUND**

Written By: LMB

FOCUS DATE: 2/7/02

FOCUS CHAIR: J. Alwood

COMPANY: Shell Chemical Company

CASE NUMBER(S): P02-0238 through P02-0239 and

**PART II: SAT RESULTS**

HEALTH: 1-2 ECOTOX: 1 OCCUPATIONAL EXPOSURE: 2 CONSUMER EXPOSURE: 1 ENVIRONMENTAL RELEASES: 0-1

ADDITIONAL SAT  
INFORMATION:

**PART III: OTHER FACTORS**

- a. PRODUCTION VOLUME: kg/yr
- b. PROD VOL OTHER: P02-0238: 5,239,000 kg/yr  
P02-0239: 9,700,000 kg/yr
- c. USE: 1. Drilling fluid component (80%)  
2. Fuel (20%)
- d. REGULATORY HISTORY:

RECEIVED  
OPPT CHIN  
02 FEB 21 AM 10:05

e. TEST DATA:

f. IMPORTED ☐ MANUFACTURED ☐ BOTH ☒

g. MSDS: ☒

h. CATEGORY: Neutral Organics CATEGORY 2:

**PART IV: SUMMARY OF SAT ASSESSMENT**

CASE NUMBERS: P02-0238 (C15) and 0239 (C16)

NOTE: Branching is a mean of 1.6 methyls per alkyl

FATE: MW212 and 226

liquid with mp = -9 °C (P)

log Kow = 8.4 and 8.9 (ClogP), 7.6 and 8.0 (EPI)

S = 0.003 to 0.004 mg/L and 0.001 mg/L at 20 °C (P)

vp = 0.044 and 0.03 mm Hg or torr at 25 °C (P);

bp = 250 and 260 °C (P);

H = 22 (P);

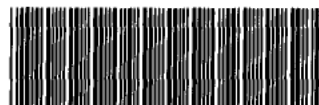
log Koc => 4.5 (P);

log fish BCF => 2.5 (P);

POTW removal = 99% via sorption and stripping

time for complete ultimate aerobic biodegradation = weeks to months;

sorption to soils and sediments = strong;



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volatilization from rivers = 1 hours and from lakes = 6 days;  
atmospheric oxidation half-life = 6.8 hours via OH radical  
PBT Potential: P2B1T1

HEALTH: Absorption is poor all routes based on analogs;

test data for the C16 analog, [REDACTED], were:

rat acute oral LD50 > 46.4 mL/kg;

mild skin irritation in rabbits

mild eye irritation in rabbits;

test data for the C20 analog [REDACTED], were:

Ames test negative

mouse micronucleus ip was negative

rat 28-d oral-gavage NOAEL = 1 g/kg/d (highest dose tested)

concern for lung toxicity if inhaled and irritation to mucous membranes;

low to moderate concern for toxicity;

ECOTOX: Submitted test data were for an analog whose chemical identity was unknown;

Predicted (P) and measured (M) toxicity values in mg/L (ppm) are:

fish 96-h LC50 = \* P

daphnid 48-h LC50 = \* P

green algal 96-h EC50 = \* P

fish chronic value = \* P

daphnid ChV = \* P

algal ChV = \* P

Predictions are based on SARs for neutral organic chemicals; SAR chemical class = alkane-C15 and C16; MW212 and 226; log Kow = 8.4 and 8.9 (ClogP); pH7; effective concentrations based on 100% active ingredients and nominal concentrations; hardness <180.0 mg/L as CaCO3; and TOC <2.0 mg/L;

low concern for toxicity;

assessment factor = 10.0

concern concentration = \*

## PART V: SUMMARY OF EXPOSURE/RELEASE

Manu:

1 site, 5 workers, 365 d/yr

Release to air1: 0.47 kg/s/d, 365 d/yr

Release to air2: 0.04 kg/s/d, over 14 (283) or 25 (239) d/yr

Release to incin: <200,000 kg/yr

Inhal 0238: vapor, 0.048-0.92 mg/d (typical), 2.9-8.2 mg/d (worst case)

Inhal 0239: 0.035-0.68 mg/d (typical), 2.1-6.2 mg/d (worst case)

Release to incin: <200,000 kg/yr

Proc1:

1 site, 3 workers, 14 (238) or 25 (239) d/yr

Inhal 0238: vapor, 0.39-0.92 mg/d (typical), 8.2-12 mg/d (worst case)

Inhal 0239: 0.29-0.68 mg/d (typical), 6.2-8.6 mg/d (worst case)

Release to incin: <200,000 kg/yr

Use1:

66 (238) or 122 (239) sites, 66 (238) or 122 (239) workers, 160d/yr

Inhal 0238: vapor, 0.39 mg/d (typical), 12 mg/d (worst case)

Inhal 0239: vapor, 0.29 mg/d (typical), 8.6 mg/d (worst case)

Release to incin 0238: 4,200,000 kg/yr

Release to incin 0239: 7,800,000 kg/yr

**Proc2:**

1 site, 3 workers, 250 d/yr

Inhal 0238: vapor, 0.39-0.7 mg/d (typical), 6-12 mg/d (worst case)

Inhal 0239: vapor, 0.29-0.5 mg/d (typical), 4.6-8.6 mg/d (worst case)

Release to incin: <200,000 kg/yr

**Use2:**

100s sites, 100s workers, 350 d/yr

Inhal 0238: vapor, 0.05-0.1 mg/d (typical), 1.4-3.0 mg/d (worst case)

Inhal 0239: 0.04-0.1 mg/d (typical), 1.1-2.0 mg/d (worst case)

Release to incin 0238: 1,050,000 kg/yr

Release to incin 0239: 1,900,000 kg/yr

**PART VI: FOCUS DECISION AND RATIONALE**

**DISPOSITION:** Drop with HPV Letter

**RATIONALE:** P02-0238/0239 was dropped from further review based on low risk to ecotoxicity. A letter will be sent to the submitter concerning HPV testing. Concern for potential risk to human health was low based on low expected inhalation exposure. Concern for potential ecotoxicity was low.

**PART VII: CCD DISPOSITION / DD**

**CCD:**